#15/Appeal Brief
4.18.03
Hayes

Attorney Docket No.: JJL10B

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of: Jung et al.

Serial No.: 09/872,039

Filed: June 1, 2001

Examiner: Kim, P.

For: APPARATUS AND METHOD FOR MEASURING OPTICAL CHARACTERISTICS OF AN OBJECT

Group Art Unit: 2857

Assistant Commissioner for Patents
Washington, D.C. 20231

BRIEF FOR APPELLANT

ASSISTANT COMMISSIONER FOR PATENTS
WASHINGTON, D.C. 20231
BOARD OF PATENT APPEALS & INTERFERENCES

A petition for extension of time accompanies this amendment and is hereby requested.

I. REAL PARTY IN INTEREST

The present application is wholly assigned to LJ Laboratories LLC, an Illinois Limited Liability Company, with its headquarters in Chicago, Illinois

II. RELATED APPEALS AND INTERFERENCES

Appellant is unaware of other appeals or interferences which will directly affect, be directly affected by, or have a bearing on, the Board's decision in this appeal.

III. STATUS OF CLAIMS

Claims 2-48 are pending in the present Application for patent. Claims 2-48 stand finally rejected by the Examiner (claims 2-8, 45 and 47 were rejected under Section 102; claims 9-27, 28-44, 46 and 48 were rejected under Section 103). Appellant appeals the rejection of claims 2-48.

IV. STATUS OF AMENDMENTS

Appellant responded to the final rejection in a request for reconsideration and amendment on August 7, 2002. No amendments were made to the claims in the response to the final rejection.

In an Advisory Action dated August 21, 2002, the Examiner maintained the prior art rejections with the statement "[t]he generation of commands from one system to another by remote control or from a remote location is well known in the art." No prior art was provided to support this assertion, particularly in the context of Appellant's invention (e.g., spectral measurements and industrial processes using spectral measurements, etc.), either in the Advisory Action or prior to the Advisory Action. Appellant mailed a Notice of Appeal on October 8, 2002. This Appeal Brief is submitted in support of the Notice of Appeal.

V. SUMMARY OF THE INVENTION

Appellant's invention provides for remote control of spectral measurement devices, such as color measuring spectrometers or spectrophotometers. The precise measurement of color is an important consideration in many industrial and commercial processes. A common process is the production or provision of an article of desired color characteristics. One common situation is where one at a second location (e.g., a factory or warehouse) desires to produce or provide at the second location an article that has color characteristics that are similar (or correspond) to color characteristics of an article at a first location. While one could simply measure objects at each of the first and second locations, Appellants have determined that there are significant limitations and potential detriments with this approach.

In accordance with Appellant's claimed invention (see, e.g., claim 2), a central, remote second location is electronically connected to a spectral measurement device at a first location. Operational commands are conveyed from the second location to a first system at the first location. The operational commands are received with the first system, and the first system is operated in accordance with the operational commands, and

spectral measurements are made at the first location in accordance with the operational commands transmitted from the second location.

Such operational commands may initiate actions such as:

* Initiating a diagnostic or test mode of operation (see, e.g., claim 9 and claims dependent therefrom);

* Receiving and storing operational data for the first system, which may be used to track performance, initiate maintenance, predict component lifetime, etc. (see, e.g., claim 19 and claims dependent therefrom); and

* Providing a software upgrade for the first system such as for bug fixing, updating color reference data (such as for determining one or more color matches, etc.), upgrading parameters for controlling a signal processing or filtering algorithm, etc. (see, e.g., claim 28 and claims dependent therefrom).

Thus, in accordance with Appellant's invention, the system at the first location may take spectral measurements, with the system at the first location at least in part operationally controlled by a second, remote location via operational commands transmitted from the second, remote location to the first location. As a result, activities premised on the correct and accurate operation of the first system may thus be carried out with greater confidence and reliability (see, e.g., claim 47).

To understand more fully one of the benefits provided by Appellant's invention, consider painting at the second location an expensive item such as a car that is intended to match a color of an object at the first location, only to later discover that the spectral measurement system at the first location was not operating correctly. An incorrect spectral measurement of the object at the first location could lead to the item at the second location being produced to have an undesired, incorrect color. Had, for example, operational commands been provided from the second location to the system at the first location, such as for initiating a test or diagnostic mode, initiating maintenance, or providing a software upgrade, more correct spectral data may have been generated by the spectral measurement system at the first location. Based on the more correct spectral

data, the item at the second location could have produced to a have a color that more accurately matched the article at the first location.

Accordingly, such a remote operational control over a spectral measurement device in accordance with Appellant's invention may be used to provide significant advantages in a variety of industrial processes.

VI. ISSUES

The issues presented for review are:

A. whether claims 2-8, 45 and 47 should have been rejected under Section 102 in view of Smith USP 6,130,752;

B. whether claims 9-27 should have been rejected under Section 103 in view of Smith combined with Wilson (USP 5,663,656);

C. whether claims 28-39 should have been rejected under Section 103 in view of Smith combined with Fawcett (USP 5,845,077);

D. whether claims 40, 46 and 48 should have been rejected under Section 103 in view of Smith; and

E. whether claims 41-44 should be rejected under Section 103 in view of Smith combined with Jung (USP 5,745,229) (Jung is assigned to the assignee of the present invention).

VII. GROUPING OF CLAIMS

Appellant respectfully requests that the appealed claims be grouped as follows:

Group A: Claims 2-46; and

Group B: Claims 47-48.

VIII. ARGUMENTS

Appellant submits that claims 2-48 are patentable over the Smith reference, whether or not the Smith reference is combined with Wilson, Fawcett or Jung. Smith clearly does not disclose or suggest the elements of independent claims 2 and 47, and the rejection of any claims under Section 102, respectfully, is in error. Appellant also respectfully submits that the Examiner has failed to establish a prima facie case of obviousness because the Examiner has not properly interpreted the Smith reference, and

all rejections were premised on this incorrect interpretation. Therefore, Appellant respectfully submits that the rejection of the presently pending claims under 35 U.S.C. §102 or 103 is improper, and withdrawal is respectfully requested.

Independent claims 2 and 47 were rejected under Section 102(e) (along with certain other claims) in view of Smith, while the remaining claims were rejected in view of Smith combined with other references. It is clear that all rejections were premised on an interpretation of the Smith reference, which (Appellant respectfully submits) is incorrect. While Appellant reserved the right to contest that Smith is in fact a proper reference under Section 102 due to Appellant's prior work, in view of the clear differences between Smith and Appellant's claimed invention, Appellant has chosen to premise this appeal (and the arguments during examination) on technical distinctions between the Smith reference and Appellant's invention.

Appellant's invention as recited in claim 2 (i.e., Group A) provides as follows; the underlined portions emphasize certain points of distinction between Appellant's invention and the Smith disclosure.

2. A method for remotely controlling through an electronic connection one or more systems that include a spectral measurement device, comprising the steps of:

providing at least a first system at a first location;

at a second location remote from the first location, generating at least one or more operational commands for the first system;

transmitting, via the electronic connection, the one or more operational commands to at least the first system;

receiving the one or more operational commands with the first system;

operating the first system in accordance with the one or more operational commands, wherein spectral measurements are made in one or a plurality of locations remote from the second location in accordance with the one or more operational commands transmitted from the second location.

Respectfully, Appellant submits that none of the underlined portions are disclosed in or suggested by Smith.

Smith discloses an on-line color monitoring and control system. Appellant has carefully reviewed Smith, including the portions cited by the Examiner (i.e.: col. 4, lines 3-4; Fig. 1, part 28; Fig. 1, part 36 and col. 4, lines 42-46; Fig. 1, part 36; Fig. 2, part 28;

Fig. 1, part 38 and col. 4, lines 42-46; col. 4, lines 35-43). Appellant does not find any disclosure or suggestion, for example, of the "remote control" aspects of Appellant's claimed invention.

In accordance with Appellant's claimed invention, at a second location remote from the first location, operational commands are generated, which are transmitted to the first location (which is remote from the second location), and at the first location spectral measurements are made in accordance with the operational commands transmitted from the second location. Respectfully, Appellant submits that Smith does not disclose or suggest this concept. While Smith discloses network block 38, he makes it clear that this is for a distinctly different purpose:

> "Finally, in accordance with the present invention, the PLC also provides an output to a network for the purpose of providing status information and the like." Col. 2, lines 47-49.
>
> "In addition, PLC 36 provides an information output to a network 38 for dissemination to various personnel involved in or responsible for the operation of the on-line color monitoring and control system 10." Col. 4, lines 42-46.

Thus, Smith discloses a network block for the sole purpose of enabling status-type information to be output from the first location; it does not disclose or suggest the hardware, structure or operation whereby operational commands for controlling the system at the first location are generated at a remote second location and transmitted from the second location to the first location. This is a critical aspect of Appellant's invention – a central, remote second location can send operational commands to a spectral measurement system at the first location and have spectral measurements made at the first location based on the remotely generated operational commands. Specific dependent features of the Group A claims (e.g., such as remotely generating operational commands for initiating a test or diagnostic mode, initiating maintenance, or providing a software upgrade) further distinguish Appellant's invention from the Smith reference.

As a result, Appellant respectfully submits that the rejection under Section 102(e) must be withdrawn; Appellant further submits that claims 2-46 are similarly

distinguishable (the other references combined with Smith do not disclose or suggest what Smith is lacking; these references are discussed in greater detail below).

Similarly, Appellant submits that the invention defined by Appellant's claim 47 (i.e., Group B) is readily distinguishable from Smith (again, the underlined portions emphasize certain points of distinction between Appellant's invention and the Smith disclosure).

47. A method for operating via an electronic connection one or more systems that include a spectral measurement device, comprising the steps of:

providing at least a first system at a first location;

making spectral measurements with the first system at the first location.

transmitting, via the electronic connection, spectral measurement data generated by the first system to a second location remote from the first location;

receiving the spectral measurement data with a system at the second location;

wherein, based on the spectral measurement data received at the second location, providing one or more articles of color characteristics that correspond to spectral measurements made by at least the first system.

As the previously-referenced portions of Smith make clear, Smith discloses a system that may make spectral measurements at the first location, while material is being produced at the first location. While a network block is shown for purposes of "providing status information and the like," it clearly does not disclose the transmission of spectral information from the first location to a second location remote from the first location, and it clearly does not disclose providing one or more articles of color characteristics that correspond to spectral measurements made by at least the first system at the remote second location. Such concepts, respectfully, are completely absent from Smith, which discloses only the spectral measurement system and the production of the article at the very same (first) location.

Accordingly, Appellant submits that the rejection under Section 102(e) should be withdrawn; Appellant further submits that claim 48 is similarly distinguishable (the other references combined with Smith do not disclose or suggest what Smith is lacking).

As previously described, properly interpreted Smith clearly does not disclose or suggest various, important aspects of Appellant's claimed invention. The references

combined with the Smith reference were not cited to provide support for such important aspects of Appellant's invention that are lacking in Smith; instead such additional references were cited to provide support for particular dependent features recited in the dependent claims. It is axiomatic, however, that where the rejection of the independent claim is improper, the rejection of dependent claims premised on the improper rejection of the independent claim likewise is improper. This is particularly true in this case where the additional references are far removed from Appellant's invention.

For example, the Wilson reference was cited as a general reference for diagnosing failure of electronic parts in a computer; Wilson does not, however, relate to spectral measuring system or the remote generation of an operational command sent to such a spectral measuring system, or the remote initiation of a diagnostic routine for such a spectral measuring system. The Fawcett reference was cited as a general reference for identifying and obtaining computer software from a network; Fawcett does not, however, relate to spectral measuring system or the remote generation of an operational command sent to such a spectral measuring system, or the remote provision of a software upgrade for such a spectral measuring system such as for bug fixing, updating color reference data (such as for determining one or more color matches, etc.), upgrading parameters for controlling a signal processing or filtering algorithm, etc., all of which can be particularly important for real-time, industrial color measuring processes. The Jung reference, assigned to the same assignee as the present application, was cited generally as a spectral measurement system and for conducting movement for a calibration process; the Jung reference, however, does not disclose the remote operational control aspects claimed in the subject claims.

Appellant's invention enables remote control of spectral systems via remotely generated operational commands, and remote production at a second location of an article of desired color characteristics based on spectral data taken at a first location remote from the second location, none of which is disclosed, suggested or enabled by Smith or the other references, either alone or in combination.

Conclusion

Accordingly, Appellant respectfully submits that the rejections of claims 2-48 under 35 U.S.C. §102 or 103 is improper, and respectfully requests withdrawal of such rejections. Appellant respectfully submits that the Examiner has failed to establish a prima facie case of obviousness because the Examiner has not properly interpreted at least the Smith reference; it lacks elements of the claimed invention and does not anticipate any of Appellant's claims.

IX. PRAYER

For at least the above reasons, Appellant respectfully requests the Board to reverse the Examiner on the issues presented above. Appellant respectfully submits that the Examiner's reliance upon the Smith reference is improper. Accordingly, Appellant respectfully requests that the Board direct the Examiner to withdraw the rejection of claims 2-48 under 35 U.S.C. §102 or 103.

Respectfully submitted,

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April 8, 2003
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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage in an envelope addressed to the Commissioner of Patents and Trademarks, Washington, D.C. 20231, on 4/8/03

Date of Deposit
Assignee: LJ Laboratories LLC

Signature

X. APPENDIX - *Claims as Appealed*

Claims

What is claimed is:

2. A method for remotely controlling through an electronic connection one or more systems that include a spectral measurement device, comprising the steps of:

providing at least a first system at a first location;

at a second location remote from the first location, generating at least one or more operational commands for the first system;

transmitting, via the electronic connection, the one or more operational commands to at least the first system;

receiving the one or more operational commands with the first system;

operating the first system in accordance with the one or more operational commands, wherein spectral measurements are made in one or a plurality of locations remote from the second location in accordance with the one or more operational commands transmitted from the second location.

3. The method of claim 2, wherein the electronic connection comprises a dedicated network or other connection.

4. The method of claim 2, wherein the electronic connection comprises a dial-in connection.

5. The method of claim 2, wherein the electronic connection comprises an Internet connection.

6. The method of claim 2, wherein the electronic connection comprises a wide area or other network.

7. The method of claim 2, wherein the second location is operated or controlled by an entity that manufactures, maintains, services or operates a plurality of systems that make spectral measurements.

8. The method of claim 2, wherein the one or more commands are selectively transmitted to the first system via an Internet web page.

9. The method of claim 2, wherein the one or more commands initiate a

diagnostic or test mode of operation in the at least first system.

10. The method of claim 9, wherein a system at the second location receives and stores diagnostic data for the at least first system.

11. The method of claim 9, wherein the diagnostic or test mode of operation is initiated periodically.

12. The method of claim 11, wherein the diagnostic or test mode of operation is initiated periodically based on time, numbers of hours of operation of the first system or a lamp in the first system, number of spectral measurements made with the first system, or upon initialization or boot-up of the first system.

13. The method of claim 12, wherein a system at the second location stores data indicative of a history of operation of at least the first system.

14. The method of claim 13, wherein the system at the second location statistically processes the data indicative of the history of operation of at least the first system.

15. The method of claim 14, wherein the system at the second location predicts the needs for servicing of at least the first system.

16. The method of claim 15, wherein the servicing includes a lamp replacement, a filter replacement or other component replacement or servicing.

17. The method of claim 9, wherein, in response to the diagnostic or test mode of operation in the at least first system, a message is selectively displayed on at least the first system.

18. The method of claim 9, wherein, in response to the diagnostic or test mode of operation in the at least first system, an Internet or other electronic message is selectively generated.

19. The method of claim 2, wherein a system at the second location receives and stores operational data for the at least first system.

20. The method of claim 19, wherein the system at the second location receives and stores operational data periodically.

21. The method of claim 20, wherein the system at the second location

receives and stores operational data periodically based on time, numbers of hours of operation of the first system or a lamp in the first system, number of spectral measurements made with the first system, or upon initialization or boot-up of the first system.

22. The method of claim 20, wherein a system at the second location stores operational data indicative of a history of operation of at least the first system.

23. The method of claim 22, wherein the system at the second location statistically processes the operational data indicative of the history of operation of at least the first system.

24. The method of claim 23, wherein the system at the second location predicts the needs for servicing of at least the first system.

25. The method of claim 24, wherein the servicing includes a lamp replacement, a filter replacement or other component replacement or servicing.

26. The method of claim 19, wherein, in response to the system at the second location receiving and storing operational data for the at least first system, a message is selectively displayed on at least the first system.

27. The method of claim 19, wherein, in response to the system at the second location receiving and storing operational data for the at least first system, an Internet or other electronic message is selectively generated.

28. The method of claim 2, wherein the one or more operational commands transmitted to at least the first system include a software upgrade for the first system, wherein after receipt of the software upgrade the first system operates based on the software upgrade.

29. The method of claim 28, wherein the software upgrade comprises a bug fix or a new release of an operating system program, an application program or other software.

30. The method of claim 28, wherein the software upgrade includes updated color reference data, wherein the first system takes one or more spectral measurements of an object or material and outputs one or more closest matches to colors or shades based

on the updated color reference data.

31. The method of claim 30, wherein the updated color reference data comprise dental shade guide data, paint reference data or Pantone color reference data.

32. The method of claim 30, wherein the updated color reference data comprise Vita dental shade guide data.

33. The method of claim 28, wherein the software upgrade includes data indicative of materials to produce a second object based on a spectral measurement made by the first system of a first object.

34. The method of claim 28, wherein the software upgrade includes virtual shade guide data.

35. The method of claim 28, wherein the software upgrade includes data indicative of constituent materials of an object to produced.

36. The method of claim 35, wherein the software upgrade includes a recipe of materials.

37. The method of claim 28, wherein the software upgrade includes normalization or calibration data.

38. The method of claim 28, wherein the software upgrade includes parameters for controlling a signal processing or filtering algorithm.

39. The method of claim 38, wherein spectral measurements are made with the first system, wherein the spectral measurements are made based on processing carried out in accordance with the parameters.

40. The method of claim 2, wherein a plurality of systems remote from the second location receive one or more operational commands from the second location, wherein the plurality of systems operate to make spectral measurements responsive to the one or more operational commands from the second location.

41. The method of claim 2, wherein the first system operates to carry out a calibration or normalization process based on the relative movement of a probe with respect to a calibration standard.

42. The method of claim 41, wherein sensors detect the physical position of

the probe with respect to the calibration standard during the calibration or normalization process.

43 The method of claim 42, wherein, after the calibration or normalization process, the first system makes spectral measurements based on calibration data and physical position data from the sensors generated during the calibration or normalization process.

44. The method of claim 41, wherein a system at the second location remotely initiates, controls, monitors and/or receives data from, a calibration or normalization process carried out by the first system.

45. The method of claim 2, wherein the second location is coupled to or comprises a location for providing one or more articles of color characteristics that correspond to spectral measurements made by at least the first system.

46. The method of claim 45, wherein a plurality of systems remote from the second location make spectral measurements of materials or objects, wherein a plurality of articles are provided, wherein the plurality of articles have color characteristics that correspond to spectral measurements made by the plurality of systems.

47. A method for operating via an electronic connection one or more systems that include a spectral measurement device, comprising the steps of:

providing at least a first system at a first location;

making spectral measurements with the first system at the first location.

transmitting, via the electronic connection, spectral measurement data generated by the first system to a second location remote from the first location;

receiving the spectral measurement data with a system at the second location;

wherein, based on the spectral measurement data received at the second location, providing one or more articles of color characteristics that correspond to spectral measurements made by at least the first system.

48. The method of claim 47, wherein a plurality of systems remote from the second location make spectral measurements of materials or objects, wherein a plurality

of articles are provided, wherein the plurality of articles have color characteristics that correspond to spectral measurements made by the plurality of systems.